

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 H04B1/69

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WIN M Z ET AL: "ULTRA-WIDE BANDWIDTH TIME-HOPPING SPREAD-SPECTRUM IMPULSE RADIO FOR WIRELESS MULTIPLE-ACCESS COMMUNICATIONS" April 2000 (2000-04), IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE INC. NEW YORK, US, PAGE(S) 679-691, XP000932191 ISSN: 0090-6778 the whole document	1-16
A	SABERINIA E ET AL: "Multi-user UWB-OFDM communications" 28 August 2003 (2003-08-28), , PAGE(S) 127-130, XP010661189 the whole document	1-16

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

15 December 2004

Date of mailing of the international search report

25/01/2005

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WON NAMGOONG: "A channelized DSSS ultra-wideband receiver" PROCEEDINGS RAWCON. IEEE RADIO AND WIRELESS CONFERENCE, XX, XX, 19 August 2001 (2001-08-19), pages 105-108, XP002254723 the whole document	1-16
A	US 5 677 927 A (FULLERTON LARRY W ET AL) 14 October 1997 (1997-10-14) the whole document	1-16
P,A	WO 2004/001998 A (WILCOX MARTIN S ; KONINKL PHILIPS ELECTRONICS NV (NL)) 31 December 2003 (2003-12-31) the whole document	1-16

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			CN 1169220 A ,B	31-12-1997
			EP 0782791 A1	09-07-1997
			HK 1007472 A1	29-08-2003
			JP 10508725 T	25-08-1998
			US 6430208 B1	06-08-2002
			WO 9609694 A1	28-03-1996
			US 2003043931 A1	06-03-2003
			US 6549567 B1	15-04-2003
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